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Schwetschkeopsis fabronia (Schwägr.) Broth. (Bryophyta: Fabroniaceae): a species new to Thailand

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Abstract

Schwetschkeopsis fabronia (Schwägr.) Broth. collected from Pa Nang Koy cave, Phrae province is a species newly recorded for Thailand. A description with illustrations is provided.

Introduction

Schwetschkeopsis Broth. (Fabroniaceae) is a temperate American and Asian genus of four species, growing as epiphytes (Gradstein et al. 2001; Frey and Stech 2009). Of 620 species of moss reported in Thailand (Sukkharak and Chantanaorrapint 2014), *Schwetschkeopsis elongata* (Dixon & P. de la Varde) W.R.Buck & H.A.Crum is the first member of *Schwetschkeopsis* found in Thailand. It was collected from Loei province, which is in the north eastern part of the country (He 2015). During a field trip to Phrae province in northern Thailand carried out by the first author, a new record of *Schwetschkeopsis* species of Thailand was discovered. In this paper, *Schwetschkeopsis fabronia* (Schwägr.) Broth. is reported with description and illustration. The voucher specimens are kept in the Department of Biology, Faculty of Science, Burapha University and at the Missouri Botanical Garden (MO).

Taxonomic Treatment

Schwetschkeopsis fabronia (Schwägr.) Broth., *Die Natürlichen Pflanzenfamilien* I(3): 878 (1907)

Basionym: *Helicodontium fabronia* Schwägr., *Species Muscorum Frondosorum, Supplementum Primum* 32(2): 294 (1830)

Leskea denticulata Sull., *Musci Alleghanienses* 62 [Schedae 19] (1846)

Platygyrium imbricatum Podp., Spisy Přírodovědecké Fakulty University v Brně 116: 35. f. 30 (1929)

Schewetschkea denticulata (Sull.) Cardot, *The Bryologist* 7: 31 (1904)

Schwetschkea japonica Besch., *Annales des Sciences Naturelles; Botanique*, series 7, 17: 362 (1893)

Schwetschkeopsis denticulata (Sull.) Broth., *Die Natürlichen Pflanzenfamilien* I(3): 878 (1907)

Schwetschkeopsis japonica (Besch.) Broth., *Die Natürlichen Pflanzenfamilien* I(3): 878 (1907)

Plants pleurocarpous, pale green, slender, in soft mats. *Stems* creeping, complanately foliate, irregularly pinnately branched, with short secondary branches, pseudoparaphyllia foliose. *Rhizoids* whitish green, clustered beneath stems. *Leaves* imbricate, erect when dry, erect-spreading when wet, ovate-lanceolate, 0.8–1.1 mm long, 0.4–0.5 mm wide, margin entire, apex acuminate; costa none; upper and median leaf cells oblong-rhomboidal, 36–48 µm long, 11–15 µm wide, moderately thick-walled, often projecting at upper ends; lower cells slightly narrower and longer, 25–51 µm long, 11–18 µm wide; basal marginal cells subquadrate, 11–21 µm long, 13–16 µm wide in a few rows along basal margin. *Dioicous*. *Perigonia* seen. *Sporophytes* not seen.

Specimens examined: THAILAND, Phrae province, Pa Nang Koy cave, on bark of trees, 1 Jan 2015, *Sukkharak 1369*, *1378*, *1379*; *ibid.*, on rock, *Sukkharak 1385* (all in herbarium, Burapha University, MO).

Habitat: 200 m, growing on bark and rocks.

Distribution: *Schwetschkeopsis fabronia* has been reported from North America, Russia, Japan, Korea, China, and Vietnam, as well as a new record to Thailand.

In Thailand, this species is readily distinguishable among small pleurocarpous mosses by its complanate foliate branches (Figs 1, 2A), absence of a costa (Fig. 2C, D), and cells papillose-projecting at upper angles of lamina, especially near the leaf apices and margins (Fig. 2E, F). However, the papillosity of the leaf cells due to the projecting upper cell ends may not be distinct in some stage of the plants. *Schwetschkeopsis fabronia* was reported from north-eastern China across the central to the south-western part of the country in Yunnan and Xizang. The distribution in Thailand represents a further range extension of this species to mainland Southeast Asia in addition to Vietnam (He and Khang 2012). The recent discovery of this species indicates that the bryophyte flora of Thailand still remains inadequately known and future floristic work should continue and be more focused in this country, which is rich in biodiversity.

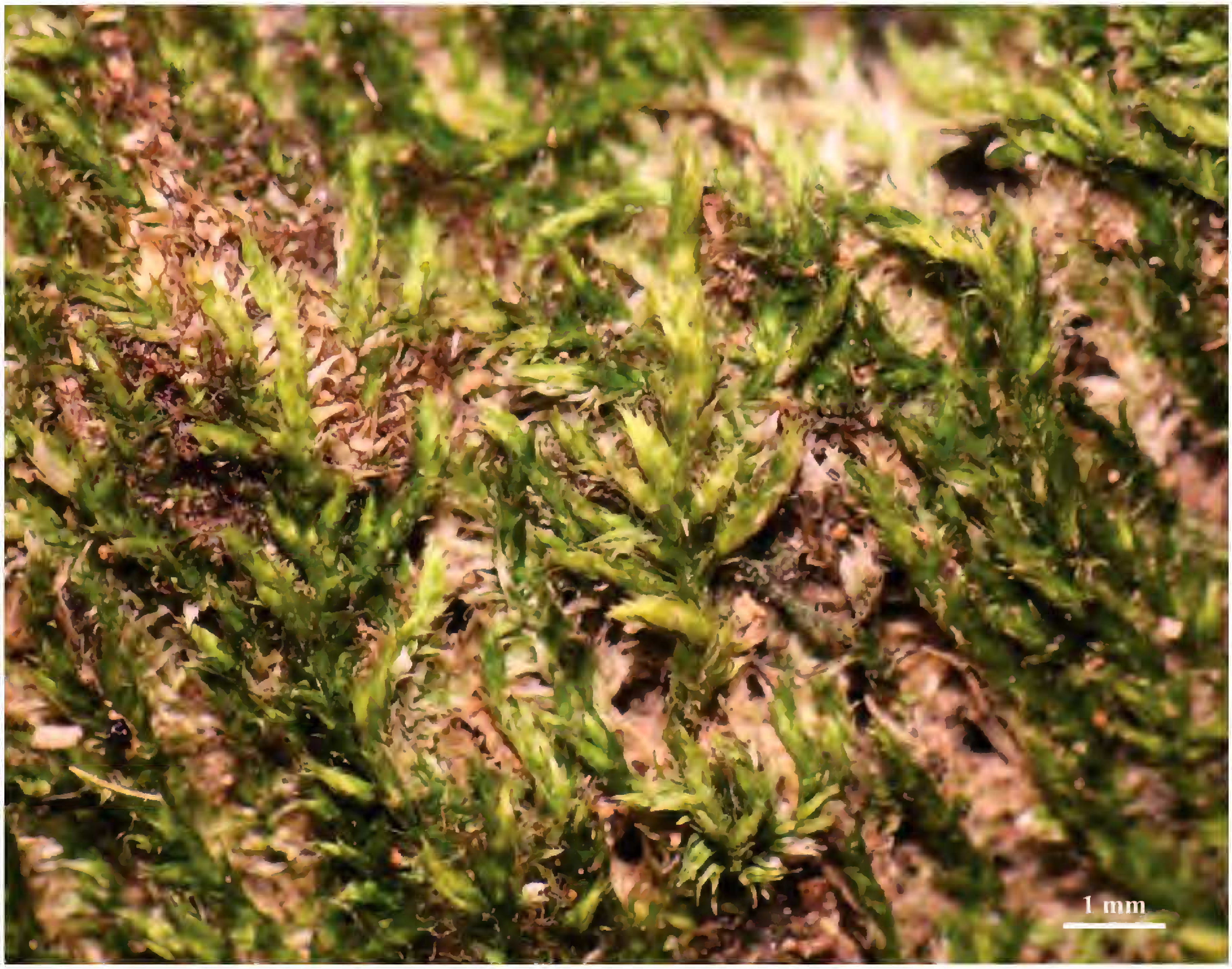


Fig. 1. Habit of *Schwetschkeopsis fabronia* (Schwägr.) Broth.

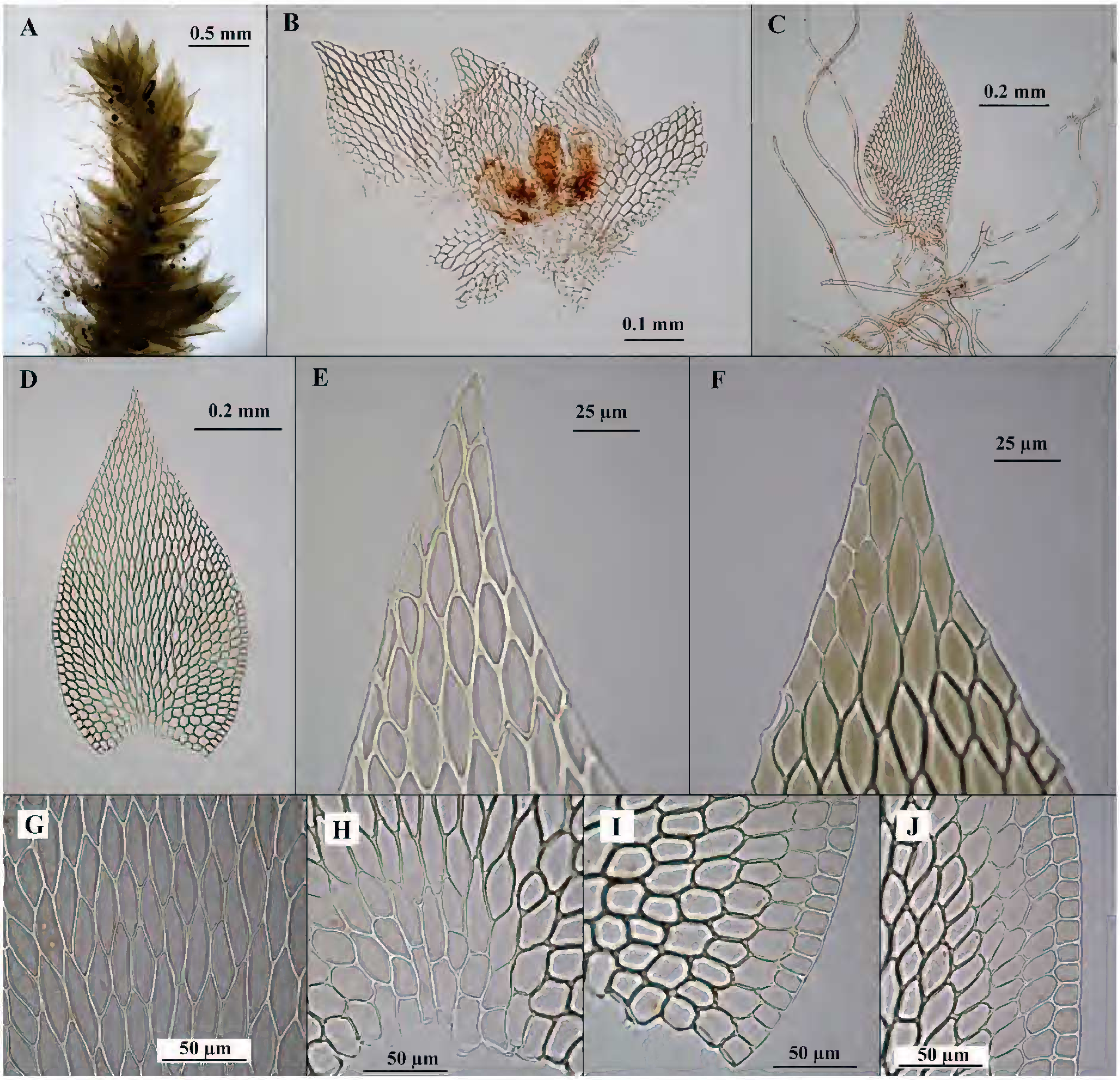


Fig. 2. *Schwetschkeopsis fabronia* (Schwägr.) Broth. **A.** Portion of a stem. **B.** Perigonium. **C.** A leaf with rhizoids attached. **D.** Leaf. **E, F.** leaf apices and apical cells. **G.** Median leaf cells. **H.** Central basal cells. **I.** Alar region. **J.** Median marginal cells. (All prepared from *Sukkharak 1369*, MO).

Key to species of *Schwetschkeopsis* found in Thailand

1 Pseudoparaphyllia present; costa absent; upper and median leaf cells oblong-rhomboidal .... *Schwetschkeopsis fabronia*

1 Pseudoparaphyllia absent; costa double, 1/8-1/7 the leaf length; upper and median leaf cells elongate-hexagonal .... *Schwetschkeopsis elongata*

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